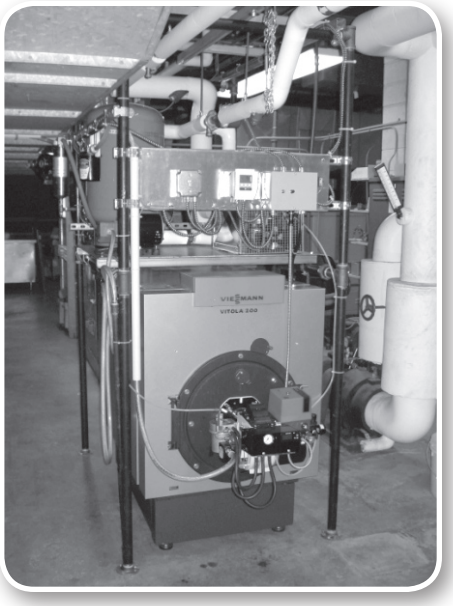
CHAPTER 6

Wisconsin and U.S. Prices and Average Costs of Fuels

Energy Efficiency and Food Service

In the food service industry, energy is nothing short of essential and money is often a concern. With the help of the Rebuild Food Service grant from the U.S. Department of Energy, both energy and money are being saved across the industry, everywhere from grocery stores and restaurants to school cafeterias and vending machines.



Institutions. Sip n' Snack Vending installed motion detectors and replaced lighting in state facility vending machines with low-heat, energy-efficient LED lights. Combined, these efforts reduced passive energy consumption of the vending machines, saving energy and money.

At the University of Wisconsin-Madison, a waste oil boiler was installed in Gordon Commons to supplement the instant steam hot water heater, and provides about 25 percent of the Commons' water each day. The boiler, purchased from LaCrosse-based Inov8 International, makes use of waste cooking oil, saving both energy and money while closing the loop on a waste stream that would otherwise end up in the garbage.

In the K-12 system, the Pittsville School District replaced appliances in its school cafeteria resulting in water and energy savings, while reaching out to other districts across the state to share its energy saving experience.

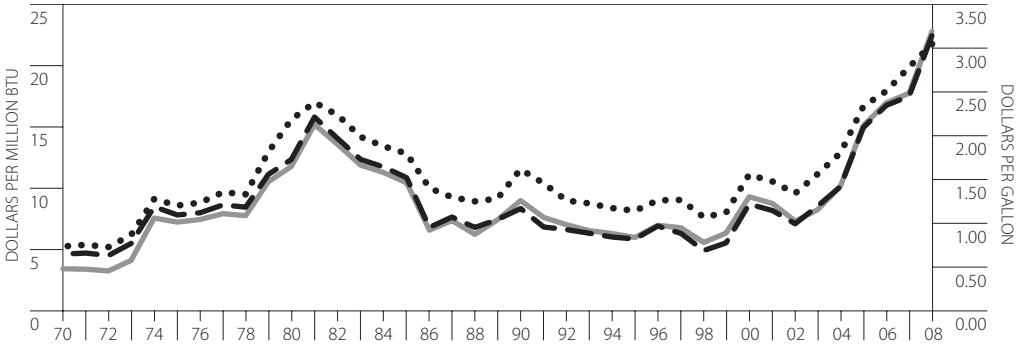
Restaurants. Travel Green Wisconsin, a program of the Wisconsin Department of Tourism, works with restaurants and other hospitality establishments to create a network of destinations committed to a series of sustainable, renewable and energy efficient standards.

Travel Green Wisconsin member The Cookery, took advantage of the rebate program as they rebuilt their establishment after a fire with an eye on creating a green, energy efficient establishment.

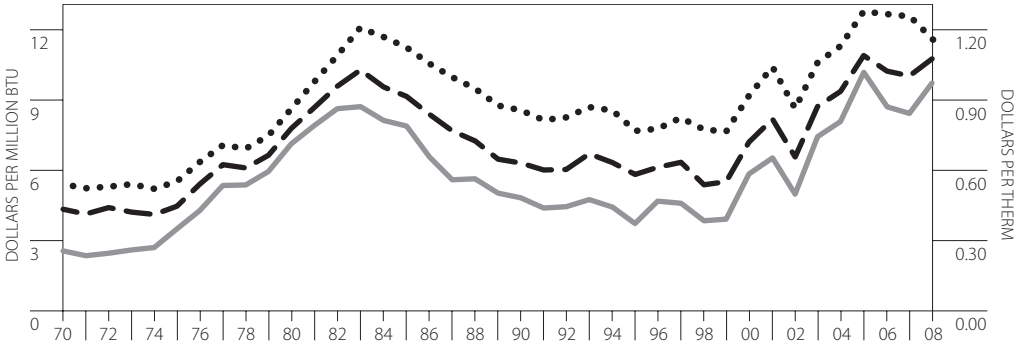
Grocery Stores. The Wisconsin Grocers' Association uses the funding to administer a reimbursement program for members that install energy efficient appliances—such as the hot case at the Piggly Wiggly in Cambridge on the right—in their grocery food service locations. So far, at least 11 stores throughout Wisconsin have taken advantage of the program to upgrade their appliances to more energy efficient models.

Wisconsin Energy Prices

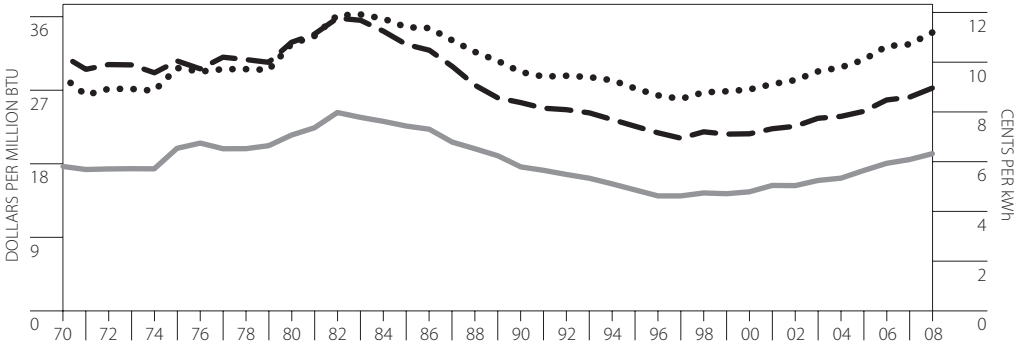
1970-2008 DISTILLATE PRICES (2008 DOLLARS)

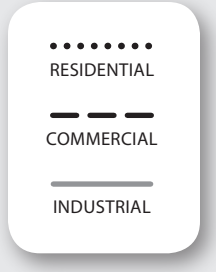


1970-2008 NATURAL GAS PRICES (2008 DOLLARS)



1970-2008 ELECTRICITY PRICES (2008 DOLLARS)





Historical prices can be presented in two ways—the current or nominal price, which was gathered during that year. The real or constant price which uses the Gross Domestic Product price deflator to adjust prices for inflation. In other words, actual prices are adjusted to be comparable to 2008 prices, in "real" terms, with the effects of inflation removed. All prices are reported in current or nominal terms unless noted explicitly as being real, constant or adjusted.

Source: Wisconsin Office of Energy Independence.

Wisconsin Residential Energy Prices, by Type of Fuel

REAL PRICE
IN 2008 DOLLARS
LPG
15.8%
HEATING OIL
9.5%
ELECTRICITY
4.4%

In 2008, residential energy real prices (2008 dollars) increased for each fuel type except natural gas: liquefied propane gas (LPG) by 15.8 percent, heating oil by 9.5 percent, and electricity by 4.4 percent.

REAL PRICE
IN 2008 DOLLARS
NATURAL GAS
7.9%

Natural gas decreased by 7.9 percent. The last four columns in the table show the same prices after adjusting for inflation. In 2008 dollars, natural gas prices have decreased by 9.3 percent over the 2005 peak price of $12.75/MMBtu. Electric prices, using 2008 dollars, have decreased by 1.9 percent compared to the 1985 peak price of $34.65/MMBtu.

1970-2008 DOLLARS PER MILLION BTU

	Current Dollars				2008 Dollars[a]			
Year	Fuel Oil	LPG	Natural Gas	Electricity	Fuel Oil	LPG	Natural Gas	Electricity
1970	1.17	2.07	1.21	6.42	5.20	9.20	5.38	28.53
1975	2.65	3.74	1.71	9.20	8.54	12.05	5.51	29.64
1980	6.87	6.55	3.80	14.39	15.56	14.84	8.61	32.59
1985	7.28	8.43	6.39	19.72	12.78	14.80	11.22	34.63
1990	7.65	8.75	5.69	19.43	11.48	13.13	8.54	29.15
1995	6.10	7.84	5.76	20.42	8.11	10.42	7.66	27.14
1996	6.87	9.69	5.94	20.16	8.96	12.64	7.75	26.29
1997	7.01	9.61	6.40	20.16	8.99	12.33	8.21	25.86
1998	5.97	7.98	6.08	21.01	7.58	10.13	7.72	26.66
1999	6.38	8.06	6.10	21.42	7.98	10.08	7.63	26.79
2000	9.03	11.22	7.49	22.06	11.05	13.74	9.17	27.01
2001	8.78	12.92	8.67	23.15	10.50	15.45	10.37	27.67
2002	8.10	10.63	7.30	23.97	9.52	12.49	8.58	28.16
2003	9.67	12.62	9.20	25.40	11.12	14.52	10.58	29.22
2004	11.49	14.17	10.09	26.57	12.85	15.85	11.28	29.72
2005[r]	15.37	16.92	11.77	28.30	16.65	18.32	12.75	30.65
2006[r]	17.04	18.26	12.05	30.79	17.88	19.15	12.64	32.31
2007[r]	19.43	19.80	12.28	31.85	19.85	20.23	12.55	32.54
2008[p]	**21.73**	**23.43**	**11.56**	**33.99**	**21.73**	**23.43**	**11.56**	**33.99**

a 2008 dollar values computed with Gross National Product Implicit Price Deflator. See table on price indices (page 122).

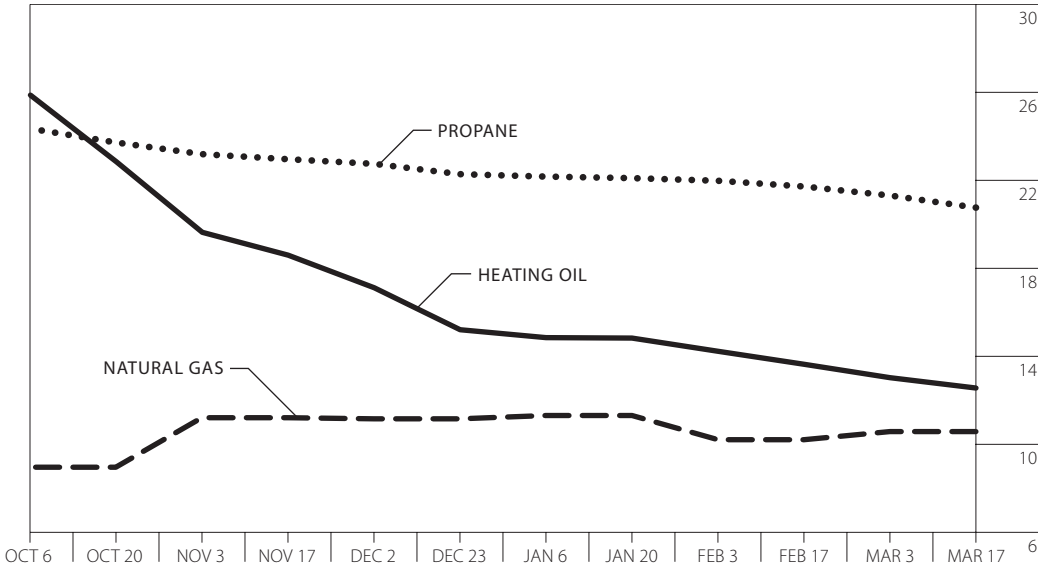
p Preliminary estimates.

r Revised.

Source: U.S. Department of Energy, "State Btu Unit Price Data Base," unpublished (May 1981); Wisconsin Office of Energy Independence, periodic telephone surveys of fuel oil and LP gas distributors and natural gas and electricity price monitoring reports (2001-2008); American Gas Association, *Gas Facts* (1971-2001); Edison Electric Institute, *Statistical Year Book* (1971-2003); Public Service Commission of Wisconsin, PSC AF 2 (2001-2008); U.S. Department of Energy/Energy Information Administration, Natural Gas Annual [DOE/EIA-0131(07)] (January 2009).

Wisconsin Residential Energy Prices, by Type of Fuel, Winter Heating Season

2008-2009 DOLLARS PER MILLION BTU



For the 2008-2009 winter heating season, heating oil and propane prices peaked in October, while natural gas prices peaked in January.

2008-2009 DOLLARS PER GALLON AND DOLLARS PER MILLION BTU

Date 2008-2009	Heating Oil		Propane		Natural Gas[a]
	$/Gallon	$/MMBtu	$/Gallon	$/MMBtu	$/MMBtu
Oct. 6, 2008	$3.59	$25.85	$2.32	$24.32	$8.93
Oct. 20, 2008	$3.17	$22.82	$2.26	$23.69	$8.93
Nov. 3, 2008	$2.72	$19.61	$2.21	$23.16	$11.18
Nov. 17, 2008	$2.58	$18.57	$2.19	$22.93	$11.18
Dec. 2, 2008	$2.37	$17.09	$2.17	$22.72	$11.13
Dec. 23, 2008	$2.11	$15.18	$2.12	$22.25	$11.13
Jan. 6, 2009	$2.06	$14.82	$2.11	$22.14	$11.28
Jan. 20, 2009	$2.05	$14.80	$2.11	$22.07	$11.28
Feb. 3, 2009	$1.97	$14.20	$2.10	$21.95	$10.18
Feb. 17, 2009	$1.89	$13.61	$2.07	$21.69	$10.18
Mar. 3, 2009	$1.80	$13.00	$2.03	$21.28	$10.55
Mar. 17, 2009	$1.74	$12.53	$1.98	$20.73	$10.55
Average Prices for the Heating Season	**$2.34**	**$16.84**	**$2.14**	**$22.41**	**$10.54**

a Natural gas pricing data presented here are different from other data in this book due to difference in data source and duration of the average. These data are from a survey of federally-identified fuel wholesalers and retailers; data elsewhere in the book are derived from Public Service Commission utility data and the federal Energy Information Administration. Most prices in the book are for the entire calendar year, while this is for the heating season (October – March).

Source: Telephone survey of energy retailers conducted by the Office of Energy Independence throughout the winter heating season, starting October 6, 2008 and ending March 17, 2009.

Wisconsin Commercial Energy Prices, by Type of Fuel

REAL PRICE IN 2008 DOLLARS

DISTILLATE OIL
28.4%

RESIDUAL OIL
28.0%

ELECTRICITY
4.3%

NATURAL GAS
7.4%

In 2008, the real price of fuel increased: distillate oil (28.4 percent), residual oil (28.0 percent), electricity (4.3 percent) and natural gas (7.4 percent).

REAL PRICE

ELECTRICITY
17.1%
LOWER THAN 1980 PEAK PRICE ADJUSTED FOR INFLATION

The real price of electricity, the major energy expense in the commercial sector, is 17.1 percent lower than its 1980 peak price, adjusted for inflation.

1970-2008 DOLLARS PER MILLION BTU

	Current Dollars				2008 Dollars[a]			
Year	Distillate Oil	Residual Oil	Natural Gas	Electricity	Distillate Oil	Residual Oil	Natural Gas	Electricity
1970	1.03	0.51	0.97	7.00	4.58	2.27	4.31	31.14
1975	2.41	2.11	1.38	9.46	7.76	6.80	4.45	30.49
1980	5.43	3.85	3.43	14.47	12.30	8.72	7.77	32.79
1985	6.16	4.85	5.20	18.52	10.82	8.52	9.13	32.52
1990	5.52	2.41	4.19	16.94	8.28	3.62	6.29	25.41
1995	4.37	2.36	4.36	16.94	5.81	3.14	5.79	22.51
1996	5.26	2.91	4.68	16.64	6.86	3.80	6.10	21.71
1997	4.88	2.55	4.92	16.41	6.26	3.27	6.31	21.05
1998	3.83	2.35	4.22	17.20	4.86	2.98	5.36	21.83
1999	4.40	2.67	4.39	17.23	5.50	3.34	5.49	21.55
2000	7.06	4.34	5.87	17.64	8.64	5.32	7.19	21.59
2001	6.80	2.67	6.81	18.58	8.13	3.19	8.14	22.21
2002	5.99	4.01	5.54	19.16	7.04	4.71	6.51	22.51
2003	7.40	4.58	7.57	20.42	8.51	5.27	8.71	23.49
2004	9.03	4.88	8.36	21.21	10.10	5.46	9.35	23.72
2005	13.77	6.35	10.03	22.47	14.92	6.88	10.86	24.34
2006	15.93	7.88	9.73	24.52	16.72	8.27	10.21	25.73
2007	17.10	8.36	9.79	25.52	17.47	8.54	10.00	26.07
2008[p]	**22.42**	**10.93**	**10.74**	**27.19**	**22.42**	**10.93**	**10.74**	**27.19**

a 2008 dollar values computed with Gross National Product Implicit Price Deflator. See table on price indices (page 122).

p Preliminary estimates.

Source: U.S. Department of Energy, "State Btu Unit Price Data Base", unpublished (May 1981), *Petroleum Marketing Monthly*, (Jan. 1985 - Mar. 2008), and unpublished analysis of Wisconsin residual oil prices (1985-2006); American Gas Association, *Gas Facts* (1971-2001); Edison Electric Institute, *Statistical Year Book* (1971-2001); U.S. Department of Energy, *Electric Sales and Revenue 1993-1997* [DOE/EIA-0540 (97)] (December 1999), *Electric Power Monthly* [DOE/EIA-0226 (03/09)] (March 2009), *Natural Gas Annual, (1994-2007)* [DOE/EIA-0131(07)] (January 2009), and *Natural Gas Monthly, (1994-2008)* [DOE/EIA-0130(2009/06)] (June 2009), Office of Energy Independence, Survey of Heating Oil and Propane Prices (SHOPP), telephone surveys of fuel oil and LP gas distributors (1977-2008); *Petroleum Marketing Annual* (2007-2008) [DOE/EIA-0487 (2008)] (August 2009), Tables 35 and 38, Oil Daily/Daily Oil and Gas Price Review, by subscription (2008).

Wisconsin Industrial Energy Prices, by Type of Fuel

1970-2008 DOLLARS PER MILLION BTU

	Current Dollars					2008 Dollars[a]				
Year	Distillate Oil	Residual Oil	Natural Gas	Coal	Electricity	Distillate Oil	Residual Oil	Natural Gas	Coal	Electricity
1970	0.76	0.50	0.57	0.66	3.96	3.38	2.22	2.53	2.93	17.59
1975	2.23	2.06	1.08	1.28	6.15	7.18	6.64	3.48	4.12	19.82
1980	5.18	3.31	3.14	1.75	9.46	11.73	7.50	7.11	3.96	21.44
1982	6.92	4.1	4.41	2.2	12.39	13.50	8.00	8.61	4.29	24.19
1985	5.92	4.21	4.48	2.11	12.83	10.40	7.39	7.87	3.71	22.54
1990	5.95	2.29	3.20	1.80	11.69	8.93	3.44	4.80	2.70	17.54
1995	4.46	2.35	2.78	1.66	11.08	5.93	3.12	3.69	2.21	14.72
1996	5.31	2.90	3.57	1.68	10.72	6.93	3.78	4.66	2.19	13.99
1997	5.24	2.54	3.56	1.66	10.90	6.72	3.26	4.57	2.13	13.99
1998	4.35	2.34	3.01	1.66	11.31	5.52	2.97	3.82	2.11	14.35
1999	5.04	2.67	3.11	1.61	11.40	6.30	3.34	3.89	2.01	14.26
2000	7.55	4.34	4.76	1.66	11.84	9.24	5.32	5.83	2.03	14.49
2001	7.28	2.67	5.43	1.80	12.77	8.70	3.19	6.49	2.15	15.27
2002	6.17	4.01	4.19	1.97	12.98	7.25	4.71	4.92	2.31	15.25
2003	7.14	4.58	6.45	1.95	13.80	8.21	5.27	7.42	2.24	15.88
2004	9.07	4.88	7.21	2.10	14.44	10.14	5.46	8.06	2.35	16.16
2005	13.92	6.35	9.35	2.56	15.79	15.08	6.88	10.13	2.77	17.10
2006	16.13	7.88	8.28	2.81	17.14	16.92	8.27	8.69	2.95	17.98
2007	17.33	8.36	8.22	3.00	18.05	17.71	8.54	8.40	3.07	18.44
2008[p]	**22.76**	**10.93**	**9.71**	**3.23**	**19.16**	**22.76**	**10.93**	**9.71**	**3.23**	**19.16**

a 2008 dollar values computed with Gross National Product Implicit Price Deflator. See table on price indices (page 122).

p Preliminary estimates.

Source: U.S. Department of Energy, "State Btu Unit Price Data Base", unpublished (May 1981), *State Energy Consumption, Price and Expenditure Report 1960-2005* http://www.eia.doe.gov/emeu/states/_seds.html, (June 2008), *Petroleum Marketing Monthly* (Jan. 1985-Mar. 2007), *Quarterly Coal Report* [DOE/EIA-0121(2008/4Q)] (March 2008), http://www.eia.doe.gov/cneaf/coal/quarterly/qcr.pdf, *Natural Gas Annual, (1994-2007)* [DOE/EIA-0131(07)] (January 2009), and *Natural Gas Monthly* [DOE/EIA-0130(2009/06] (June 2009); Office of Energy Independence, Survey of Heating Oil and Propane Prices (SHOPP), telephone surveys of fuel oil and LP gas distributors (1977-2008); *Petroleum Marketing Annual* (2007-2008) [DOE/EIA-0487 (2008)] (August 2009), Tables 35 and 38; Oil Daily/Daily Oil and Gas Price Review, by subscription (2008).

REAL PRICE IN 2008 DOLLARS

NATURAL GAS **15.6%**

COAL **5.4%**

ELECTRICITY **3.9%**

DISTILLATE OIL **28.5%**

RESIDUAL OIL **28.0%**

In 2008, the real prices of all industrial fuels increased.

REAL PRICE

COAL **24.8%**

ELECTRICITY **20.8%**

LOWER THAN 1982 PRICE PEAK ADJUSTED FOR INFLATION

However, the real price of coal and electricity are 24.8 and 20.8 percent lower than their respective 1982 price peaks, adjusted for inflation.

Wisconsin Motor Gasoline and Diesel Fuel Retail Prices, by Grade and Type of Service

REAL PRICE IN 2008 DOLLARS

GASOLINE

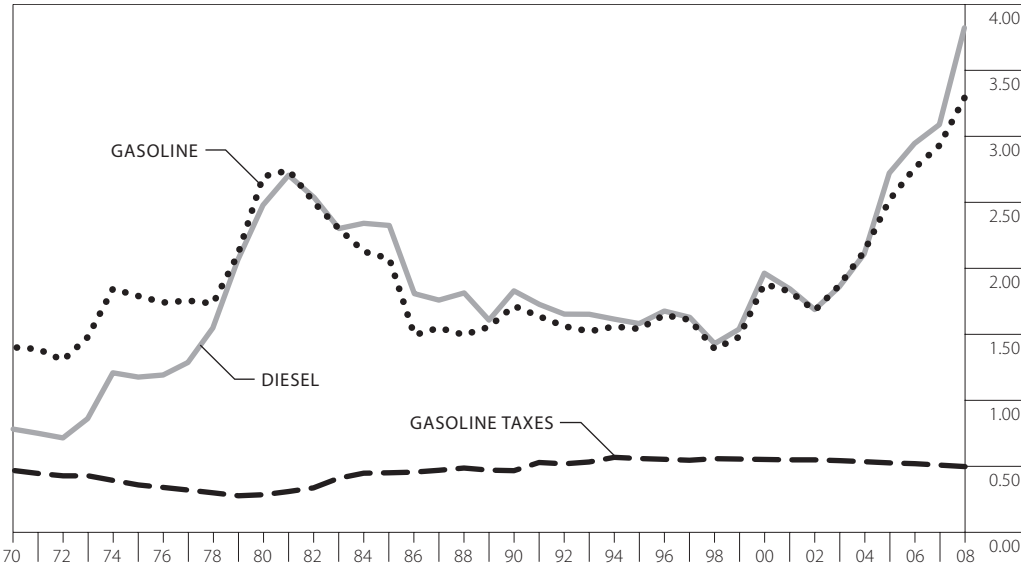
12.3%

FROM 2007

The real price of gasoline in 2008 was 12.3 percent higher than in 2007. Real gas prices in 2008 were the highest on record since data for this book were compiled in 1970. The real price of diesel fuel increased by 23.8 percent since 2007.

Starting on January 1, 1995, only reformulated gasoline could be sold in six southeastern Wisconsin counties in order to improve air quality.

1970-2008 DOLLARS PER GALLON (2008 DOLLARS)



1970-2008 DOLLARS PER GALLON

Year	Current Dollars				2008 Dollars		
	Regular Unleaded Gasoline (Self-Service)[a]	Regular Reformulated Gasoline	Diesel Fuel[b]	Federal and State Taxes on Gasoline[c]	Regular Unleaded Gasoline (Self-Service)[a]	Diesel Fuel[b]	Federal and State Taxes on Gasoline[c]
1970	0.332		0.184	0.110	1.397	0.777	0.464
1975	0.554		0.363	0.110	1.785	1.171	0.354
1980	1.188	NA	1.093	0.124	2.691	2.476	0.280
1985	1.178	NA	1.321	0.254	2.069	2.320	0.446
1990	1.139	NA	1.215	0.308	1.709	1.823	0.462
1995	1.156	1.181	1.186	0.417	1.536	1.576	0.554
2000	1.532	1.556	1.598	0.447	1.875	1.956	0.547
2001	1.522	1.558	1.538	0.455	1.820	1.839	0.544
2002	1.424	1.427	1.431	0.463	1.673	1.681	0.544
2003	1.623	1.631	1.613	0.468	1.867	1.856	0.538
2004	1.901	1.919	1.884	0.474	2.126	2.107	0.530
2005	2.321	2.338	2.510	0.481	2.514	2.719	0.521
2006	2.626	2.639	2.804	0.491	2.755	2.942	0.515
2007	2.866	2.851	3.020	0.493	2.928	3.086	0.504
2008	**3.289**	**3.525**	**3.821**	**0.493**	**3.289**	**3.821**	**0.493**

a Since 1991, more than 99 percent of the gasoline sold in Wisconsin has been unleaded. The price is for full service gasoline until 1979 when the price is changed to represent self-service gasoline.

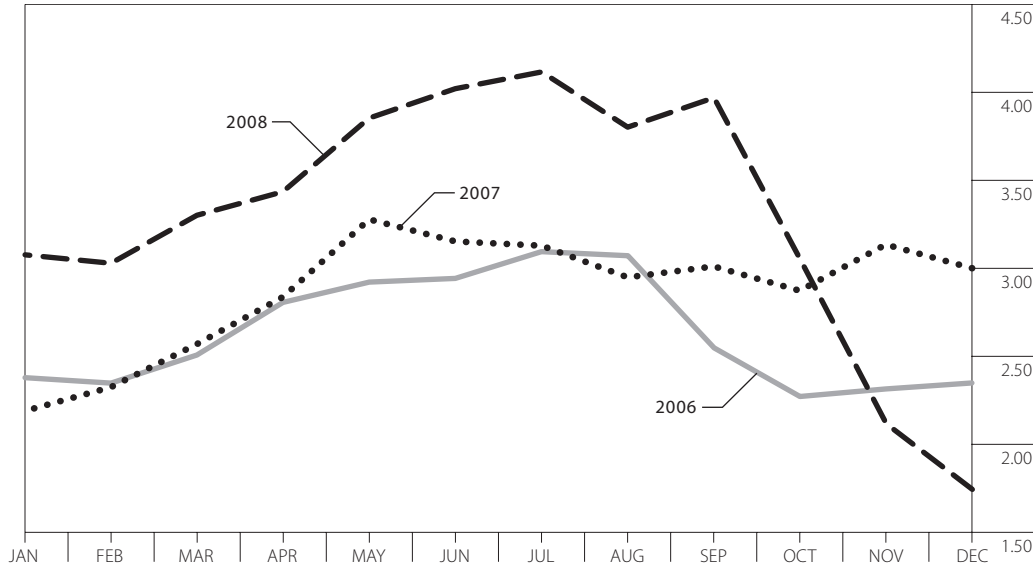
b From 1970 to 1988, the price is the full service price. Beginning in 1989 the price is the self-service price.

c A state petroleum inspection fee is also charged. In 2007, this fee was 2 cents per gallon.

Source: Wisconsin Division of the American Automobile Association, *Fuel Gauge Report*.

Wisconsin Retail and Wholesale Self-Service Unleaded Motor Gasoline Prices, by Month[a]

2006-2008 DOLLARS PER GALLON – RETAIL



2008 WHOLESALE PRICE UNLEADED GASOLINE 16.4%

The retail and wholesale prices are for unleaded, regular grade gasoline. The wholesale price of unleaded gasoline (before taxes and retail mark-up) increased 16.4 percent in 2008, while the statewide retail price increased 14.8 percent.

2006-2008 DOLLARS PER GALLON

	2006		2007		2008	
Month	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale
January	2.375	1.741	2.186	1.506	3.073	2.424
February	2.344	1.688	2.321	1.739	3.025	2.425
March	2.504	1.914	2.566	1.940	3.298	2.624
April	2.803	2.163	2.834	2.238	3.432	2.856
May	2.918	2.233	3.274	2.638	3.850	3.167
June	2.939	2.287	3.149	2.446	4.017	3.356
July	3.091	2.424	3.125	2.385	4.112	3.304
August	3.068	2.320	2.945	2.310	3.798	3.118
September	2.545	1.845	3.007	2.322	3.965	3.062
October	2.268	1.655	2.869	2.280	3.048	2.189
November	2.311	1.693	3.131	2.486	2.114	1.409
December	2.345	1.700	2.997	2.396	1.741	1.134
Average	**2.626**	**1.972**	**2.867**	**2.224**	**3.289**	**2.589**

a The retail and wholesale prices are for a blend of regular, unleaded conventional and reformulated gasolines. The wholesale price refers to the delivered dealer tank wagon price.

Source: U. S. Department of Energy, Energy Information Administration, *Petroleum Marketing Annual* 1993-2008, Table 29. http://www.eia.doe.gov/oil_gas/petroleum/data_publications/petroleum_marketing_annual/pma.html; Wisconsin Division of the American Automobile Association, *Fuel Gauge Report* (1993-2008).

Wisconsin Electric Utility Average Costs of Fuel

REAL COST IN 2008 DOLLARS

COAL
11.4%

NATURAL GAS
23.7%

OIL
22.1%

In 2008, the real (2008 dollars) cost of coal used as electric utility fuel increased 11.4 percent. The utility cost of natural gas increased 23.7 percent. Oil prices increased 22.1 percent. Adjusted for inflation, coal prices are 45.3 percent down from their peak in 1982, also the peak year for oil prices. Natural gas prices peaked in 2008. Coal remained the lowest cost electric utility fossil fuel.

1970-2008 DOLLARS PER MILLION BTU

	Current Dollars[b,c]			2008 Dollars[a]		
Year	Oil	Natural Gas	Coal	Oil	Natural Gas	Coal
1970	0.66	0.35	0.39	2.93	1.56	1.73
1975	2.01	0.80	0.89	6.48	2.58	2.87
1980	4.98	2.89	1.44	11.28	6.55	3.26
1982	6.98	4.27	1.78	13.62	8.33	3.47
1985	5.43	4.17	1.80	9.54	7.32	3.16
1990	5.26	2.93	1.36	7.89	4.40	2.04
1995	3.85	2.21	1.14	5.12	2.94	1.52
1996	4.82	3.01	1.06	6.29	3.93	1.38
1997	4.63	3.15	1.09	5.94	4.04	1.40
1998	3.49	2.64	1.07	4.43	3.35	1.36
1999	4.14	2.91	1.02	5.18	3.64	1.28
2000	6.27	4.45	1.02	7.68	5.45	1.25
2001	6.45	4.73	1.05	7.71	5.65	1.26
2002	5.24	3.78	1.10	6.16	4.44	1.29
2003	6.32	5.83	1.13	7.27	6.71	1.30
2004	7.24	6.36	1.16	8.10	7.11	1.30
2005	12.19	9.46	1.26	13.20	10.25	1.36
2006	14.98	7.89	1.47	15.72	8.28	1.54
2007	16.52	7.89	1.67	16.88	8.06	1.71
2008[p]	**20.61**	**9.97**	**1.90**	**20.61**	**9.97**	**1.90**

a 2008 dollar values computed with Gross National Product Implicit Price Deflator. See table on price indices (page 122).

b Beginning in 1988, the U.S. DOE data source has been used.

c Beginning in 1990, *Statistical Yearbook* natural gas data has been used.

p Preliminary estimates.

Source: Edison Electric Institute, *Statistical Yearbook* (1971-1996); American Gas Association, *Gas Facts* (1971-1990). U.S. Department of Energy, Energy Information Administration, *Electric Power Annual*, 1990-2000, [DOE/EIA-0348(2000)/1] (August 2001), and *Electric Power Monthly*, [DOE/EIA-0226(2009/03)] www.eia.doe.gov/cneaf/electricity/epm/epm_sum.html

Wisconsin Electric Utility Coal Costs and Sulfur Content of Coal, by Utility Plant

2008

Plant	Receipts Thousand Tons[b]	Average Btu Per Pound	Average Cents Per Million Btu	Average Dollars Per Ton	Average Percent Sulfur[a]
Dairyland Power Cooperative	3,182	9,738	223.0	43.43	0.61%
Alma - Madgett	2,010	9,685	196.8	38.11	0.55%
Genoa 3	1,172	9,845	274.6	54.06	0.69%
Madison Gas and Electric Co.	99	11,656	310.1	72.30	1.37%
Blount Street	99	11,656	310.1	72.30	1.37%
Manitowoc Public Utilities	239	12,015	177.6	42.69	1.43%
Manitowoc	239	12,015	177.6	42.69	1.43%
Northern States Power Co.	127	8,761	315.0	55.14	0.23%
Bay Front	127	8,761	315.0	55.14	0.23%
Wisconsin Electric Power Co.	11,199	8,603	176.3	30.34	0.33%
Oak Creek	3,347	8,782	196.2	34.46	0.21%
Pleasant Prairie	4,985	8,424	155.6	26.22	0.32%
Presque Isle	2,062	10,236	209.8	42.96	0.38%
Valley	805	11,864	319.5	75.81	0.47%
Wisconsin Power and Light Co.	7,966	8,501	182.7	31.06	0.32%
Columbia	4,563	8,452	148.4	25.09	0.31%
Edgewater	2,761	8,519	240.9	41.05	0.32%
Nelson Dewey	642	9,745	195.5	38.10	0.33%
Wisconsin Public Service Corp.	4,195	8,597	192.4	33.08	0.30%
Pulliam	1,361	8,560	176.8	31.45	0.29%
Weston	2,834	8,615	196.7	33.90	0.30%
Wisconsin	**27,007**	**8,713**	**195.5**	**34.07**	**0.38%**
United States	**765,375**	**10,044**	**205.0**	**41.23**	**0.90%**

a Percent by weight.

b Includes Weston 4.

Source: U.S. Department of Energy, EIA, *Electric Power Monthly*, [DOE/EIA-0226(2009/04)] (April 2009); http://www.eia.doe.gov/cneaf/electricity/epm/epm_sum.html. Annual reports of Wisconsin electric generating utilities (2008), http://psc.wi.gov/a_annlreport/default.htm.

WISCONSIN UTILITY COAL HAS 58% LESS SULFUR AND COSTS 4.6% LESS IN CENTS PER MMBTU THAN THE AVERAGE COAL USED IN THE U.S.

Wisconsin utility coal has 58 percent less sulfur and costs 4.6 percent less, in cents per MMBtu, than the average coal used in the United States. Wisconsin utilities have been very successful in meeting and maintaining the 1993 goals of Wisconsin's acid rain control law through increased use of low sulfur coal. In 2008, the average Wisconsin coal cost, in cents per million Btu, increased 20.3 percent, while sulphur content decreased 2.6 percent.

Wisconsin Natural Gas Prices, by Economic Sector

IN 2008
NATURAL GAS INCREASED IN
ALL SECTORS

In 2008, natural gas prices increased in all sectors. On average, the price increased 11.0 percent.

1970-2008 DOLLARS PER MILLION BTU

Year	Residential	Commercial	Industrial	Utility	Average
1970	$1.21	$0.97	$0.57	$0.35	$0.80
1975	1.71	1.38	1.08	0.80	1.31
1980	3.80	3.43	3.14	2.89	3.42
1985	6.39	5.20	4.48	4.17	5.36
1990	5.69	4.19	3.20	2.93	4.37
1995	5.76	4.36	2.78	2.21	4.20
2000	7.49	5.87	4.76	4.45	5.93
2005	11.77	10.03	9.35	8.82	10.20
2006	12.05	9.73	8.28	7.76	9.79
2007[r]	12.28	9.79	8.22	7.79	9.86
2008[p]	**12.62**	**10.74**	**9.71**	**9.43**	**10.94**

p Preliminary estimates.
r Revised.
Source: Pages 109 and 115 of this publication, and the following table.

Industrial and Commercial Natural Gas Prices, in Detail

Because Wisconsin's industrial and commercial sectors purchase transport gas, their average gas prices fall below the average utility system price reported in the U.S. Department of Energy's *Natural Gas Annual* and *Natural Gas Monthly*.

2006-2008 DOLLARS PER MILLION BTU

	Industrial			Commercial		
	2006	2007[r]	2008[p]	2006	2007[r]	2008[p]
Interruptible	$8.20	$7.96	$9.27	$8.20	$7.96	$9.27
Firm	10.40	9.64	10.69	10.40	9.64	10.69
Space Heating	10.10	10.12	10.95	10.10	10.12	10.95
Transport	8.01	7.94	9.52	8.01	7.94	9.52
Average without Transport (utility system gas)	**$9.44**	**$9.46**	**$10.55**	**$10.18**	**$10.39**	**$11.12**
Average with Transport	**$8.25**	**$8.22**	**$9.71**	**$9.63**	**$9.79**	**$10.74**

p Preliminary estimates.
r Revised.
Source: Public Service Commission of Wisconsin, Accounts and Finance Division, form PSC-AF 2 (1994-2008); U.S. Department of Energy, *Natural Gas Annual, 1994-2007* [DOE/EIA-0131(08)] (January 2009), and *Natural Gas Monthly* [DOE/EIA-0130(2008/06)] (June 2008).

Wisconsin Natural Gas Prices, by Public Service Commission of Wisconsin Sector

1970-2008 DOLLARS PER MILLION BTU

	Residential		Commercial and Industrial			
Year	General	Space Heating	Firm	Interruptible	Space Heating	Average
1970	$1.55	$1.18	$0.72	$0.48	$0.92	$0.81
1975	2.13	1.68	1.16	1.00	1.39	1.31
1980	4.25	3.78	3.26	3.01	3.45	3.42
1985	7.49	6.35	5.02	4.04	5.30	5.33
1990	6.78	5.67	4.27	2.97	4.52	4.86
1995	7.02	5.74	4.14	2.46	4.63	4.71
1996	7.03	5.95	4.28	3.30	4.76	5.15
1997	7.47	6.39	4.96	3.64	5.17	5.62
1998	7.40	6.08	4.68	3.14	4.74	5.28
1999	7.60	6.10	5.21	3.16	4.71	5.33
2000	8.87	7.49	7.32	4.63	6.05	6.75
2001	10.01	8.66	7.60	5.17	7.27	7.86
2002	8.79	7.29	6.19	3.91	5.92	6.50
2003	10.11	9.19	8.00	5.89	7.75	8.39
2004	11.21	10.08	8.80	6.95	8.56	9.27
2005	13.35	11.75	10.50	8.92	10.18	10.82
2006	13.70	11.80	10.40	8.20	10.10	10.75
2007	13.57	11.79	9.64	8.00	10.15	10.77
2008p	**14.35**	**12.57**	**10.69**	**9.27**	**10.95**	**11.76**

AVERAGE PRICE OF NATURAL GAS 9.2%

The prices of utility gas for all customer classes increased in 2008. The average price of natural gas in 2008 increased by 9.2 percent over 2007. Prices for commercial and industrial gas do not include the price of transport gas but represent the cost of gas purchased directly from the utility.

p Preliminary estimates.

Source: Public Service Commission of Wisconsin, Accounts and Finance Division, *Statistics of Wisconsin Public Utilities*, Bulletin #8 (1971-1993), and form PSC-AF 2 (1994-2008).

Wisconsin Electricity Prices, by Economic Sector

IN 2008
ELECTRICITY INCREASED IN
ALL SECTORS

Electricity prices increased across all sectors in 2008. The Public Service Commission of Wisconsin and the federal Department of Energy, Energy Information Administration (EIA) both report electricity prices for Wisconsin economic sectors. Because of differences in sector definitions, accounting methods and inclusion of cooperative utilities, their prices do not match.

1970-2008 CENTS PER kWh

	Public Service Commission of Wisconsin Sectors				Energy Information Administration[c]			
Year	Residential	Commercial & Industrial	Rural[a]	Average[b]	Residential	Commercial	Industrial	Average[b]
1970	2.13	1.69	2.41	1.89	2.19	2.39	1.35	1.91
1975	3.22	2.60	3.42	2.85	3.14	3.23	2.10	2.80
1980	4.80	3.91	4.80	4.24	4.91	4.94	3.23	4.31
1985	6.70	5.15	6.38	5.67	6.73	6.32	4.38	5.75
1990	6.55	4.68	6.29	5.27	6.63	5.78	3.99	5.37
1995	6.91	4.55	6.61	5.27	6.97	5.78	3.78	5.36
1996	6.81	4.43	6.40	5.15	6.88	5.68	3.66	5.25
1997	6.81	4.40	6.27	5.11	6.88	5.60	3.72	5.22
1998	7.16	4.61	6.42	5.35	7.17	5.87	3.86	5.44
1999	7.31	4.69	6.56	5.46	7.31	5.88	3.89	5.53
2000[r]	7.55	4.83	6.84	5.65	7.53	6.02	4.04	5.71
2001[r]	7.93	5.18	7.23	6.01	7.90	6.34	4.36	6.08
2002[r]	8.19	5.34	7.59	6.26	8.18	6.54	4.43	6.28
2003[r]	8.73	5.63	8.27	6.60	8.67	6.97	4.71	6.64
2004[r]	9.11	5.84	8.73	6.81	9.07	7.24	4.93	6.88
2005[r]	9.72	6.36	9.23	7.38	9.66	7.67	5.39	7.48
2006[r]	10.57	7.01	10.22	8.08	10.51	8.37	5.85	8.13
2007[r]	10.90	7.30	10.56	8.38	10.87	8.71	6.16	8.48
2008	**11.56**	**7.67**	**10.90**	**8.84**	**11.60**	**9.28**	**6.54**	**9.04**

a Rural, as listed by utilities.

b Utilities' average revenue per kWh.

c Historically, these data were from the Edison Electric Institute which began using U.S. Department of Energy electricity prices from the Energy Information Administration (EIA) in 1996.

r Denotes years where numbers have been revised based on cited data sources.

Source: Public Service Commission of Wisconsin, Accounts and Finance Division, *Statistics of Wisconsin Public Utilities*, Bulletin #8 (1971-1994); Edison Electric Institute, *Statistical Yearbook* (1971-1996); U.S. Department of Energy, Energy Information Administration, *Electric Sales and Revenue 1993-2000* [DOE/EIA-0540 (2000)] (November 2001), and *Electric Power Monthly*, Table 5.6.B, [DOE/EIA-0226 (2009/03)] (March 2009). www.eia.doe.gov/cneaf/electricity/epm/epm_sum.html

Average Utility Electricity and Natural Gas Prices, by Economic Sector, for Selected Midwestern States

2008 ELECTRICITY (CENTS PER kWh)

State	Average	Residential	Commercial	Industrial
Wisconsin	**9.04**	**11.60**	**9.28**	**6.54**
Illinois	9.21	11.07	8.53	7.83
Indiana	7.13	8.93	7.81	5.51
Iowa	7.00	9.72	7.28	4.86
Michigan	9.14	10.94	9.43	6.86
Minnesota	7.83	9.79	7.86	5.96
Ohio	8.44	10.13	9.26	6.23
U.S. Average	**9.81**	**11.35**	**10.27**	**7.02**

2008 NATURAL GAS (DOLLARS PER 1,000 CUBIC FEET)

State	City Gate[a]	Residential	Commercial	Industrial
Wisconsin	**8.71**	**12.80**	**11.28**	**10.70**
Illinois	8.48	12.09	11.72	NA
Indiana	8.94	NA	11.52	10.04
Iowa	NA	11.93	10.22	8.96
Michigan	9.22	11.82	10.55	10.21
Minnesota	8.37	11.30	10.52	9.09
Ohio	10.41	14.51	12.58	13.19
U.S. Average	**9.18**	**13.68**	**11.99**	**9.58**

NA – Not available.

a City Gate is the point where a pipeline or distribution company delivers natural gas to the natural gas utility serving the city and the surrounding area.

Source: U.S. Department of Energy, EIA, *Electric Power Monthly*, Table 5.6.B [DOE/EIA-0226 (2009/03)] (March 2009) and *Natural Gas Monthly*, Tables 17, 18, 19 and 20 [DOE/EIA-0130 (2009/06)] (June 2009). www.eia.doe.gov/cneaf/electricity/epm/epm_sum.html

WISCONSIN'S AVERAGE ELECTRICITY PRICE WAS 7.8% LESS THAN THE NATIONAL AVERAGE BUT 3rd HIGHEST IN THE MIDWEST

In 2008, Wisconsin's average electricity price was 7.8 percent less than the national average but the third highest in the Midwest. Wisconsin's commercial and industrial electricity prices were lower than the national averages for the same sectors by 9.6 and 6.8 percent respectively.

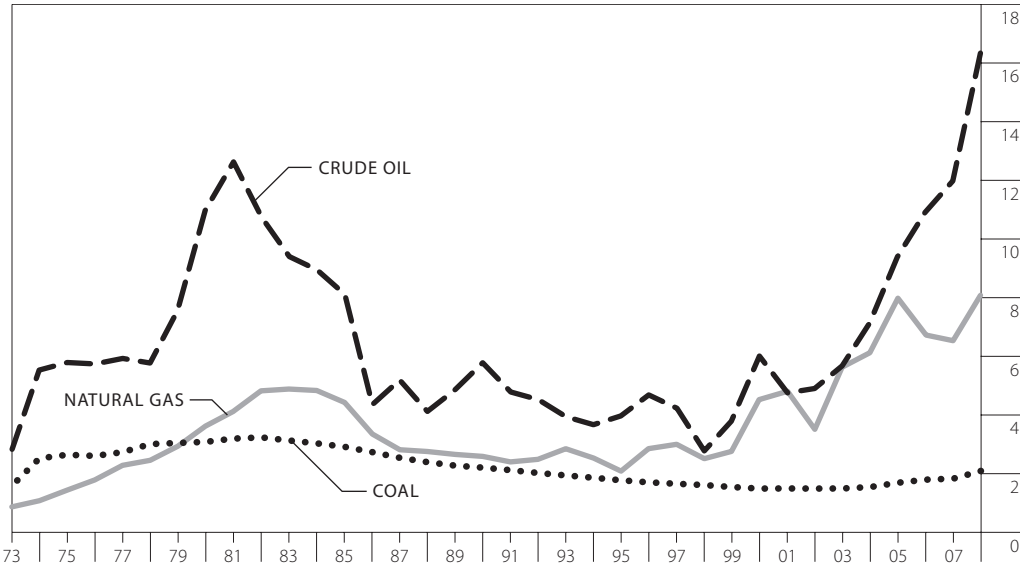
Ohio and Michigan lead the Midwest with the highest natural gas prices which are 13.4 and .44 percent above national average. Wisconsin's City Gate[a] natural gas price is 5.1 percent below the national average.

U.S. Energy Prices

COST OF CRUDE OIL
173.8%
SINCE 2000

In 2008, the real (2008 dollars) cost of all fuels increased—36.5 percent for crude oil, 14.5 percent for coal, and 24 percent for natural gas. Since 2000, the cost of crude oil has increased by 173.8 percent.

1973-2008 DOLLARS PER MILLION BTU (2008 DOLLARS)



1973-2008 DOLLARS PER MILLION BTU

Year	Current Dollars				2008 Dollars		
	Crude Oil Refiners Cost[a] $/Barrel	Crude Oil Refiners Cost $/MMBtu	Natural Gas Wellhead[b] $/MMBtu	Coal Utility Cost[c] $/MMBtu	Crude Oil Refiners Cost $/MMBtu	Natural Gas Wellhead $/MMBtu	Coal Utility Cost $/MMBtu
1973	4.15	0.72	0.22	0.41	2.75	0.85	1.56
1975	10.38	1.79	0.44	0.81	5.77	1.42	2.62
1980	28.07	4.84	1.59	1.35	10.96	3.60	3.06
1985	26.75	4.61	2.51	1.65	8.10	4.41	2.89
1990	22.22	3.83	1.71	1.46	5.75	2.57	2.18
1995	17.23	2.97	1.55	1.32	3.95	2.06	1.75
2000	28.26	4.87	3.68	1.20	5.96	4.51	1.47
2005	50.24	8.66	7.33	1.54	9.38	7.94	1.67
2006	60.24	10.39	6.39	1.69	10.90	6.70	1.77
2007[r]	67.94	11.71	6.37	1.77	11.97	6.51	1.81
2008	**94.73**	**16.33**	**8.07**	**2.07**	**16.33**	**8.07**	**2.07**

a Refiners cost of crude oil is the composite price for domestic and imported crude oil. Most of this crude oil is purchased under contract as opposed to the spot market.

b U.S. DOE natural gas price information is reported in dollars per 1,000 cubic feet. This table assumes: (1) 5.8 MMBtu per one barrel of crude oil, and (2) 1,000 cubic feet = 1 MMBtu.

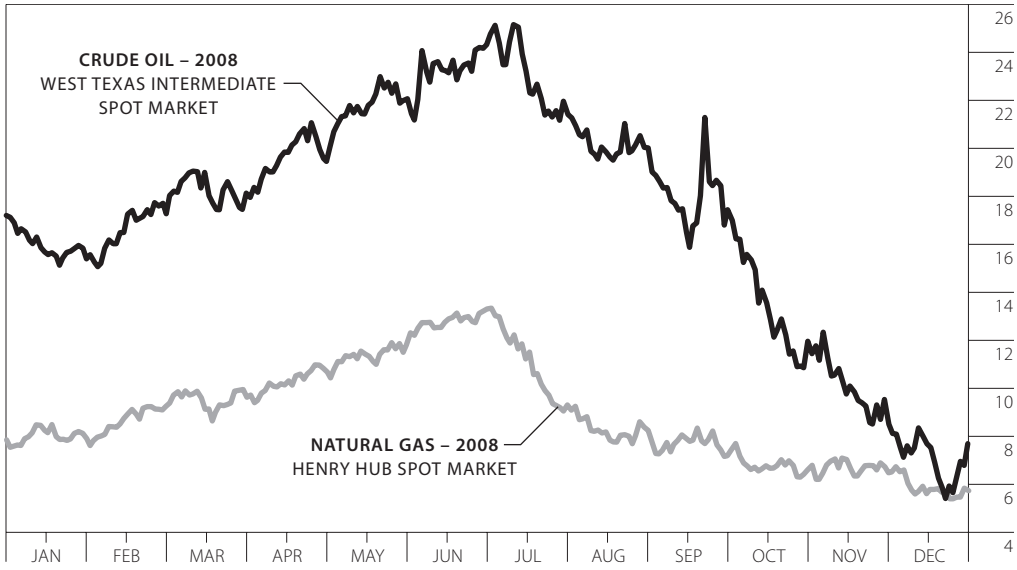
c Includes cost of delivery to utilities.

r Revised.

Source: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review* Tables 9.1, 9.10 and 9.11 [DOE/EIA-0035(2009/05)] (May 2009); www.eia.doe.gov/mer

U.S. Spot Market Prices of Crude Oil & Natural Gas

2008 DOLLARS PER MILLION BTU (2008 DOLLARS)[a]



WEST TEXAS INTERMEDIATE
37.9%
HENRY HUB
27.0%

In 2008, the average West Texas Intermediate crude oil spot market price increased 37.9 percent, while the Henry Hub[b] spot market price of natural gas increased 27.0 percent.

2005-2008 DOLLARS PER MILLION BTU[a]

	Crude Oil West Texas Intermediate				Natural Gas Henry Hub			
Month	2005	2006	2007	2008	2005	2006	2007	2008
Jan.	8.08	11.29	9.39	16.03	6.15	8.66	6.54	7.99
Feb.	8.30	10.63	10.22	16.44	6.14	7.53	8.03	8.54
Mar.	9.34	10.81	10.41	18.18	6.97	6.87	7.11	9.42
Apr.	9.13	11.97	11.04	19.41	7.16	7.06	7.60	10.18
May	8.59	12.21	10.93	21.62	6.47	6.17	7.64	11.27
Jun.	9.72	12.23	11.61	23.09	7.19	6.20	7.35	12.69
Jul.	10.17	12.83	12.77	23.01	7.62	6.15	6.22	11.09
Aug.	11.20	12.59	12.47	20.12	9.53	7.12	6.23	8.26
Sep.	11.31	11.00	13.77	17.91	12.01	4.90	6.07	7.63
Oct.	10.73	10.16	14.76	13.22	13.50	5.87	6.73	6.74
Nov.	10.06	10.19	16.30	9.90	10.31	7.43	7.11	6.68
Dec.	10.24	10.68	15.74	7.14	13.00	6.73	7.14	5.86
Average $/MMBtu	**9.74**	**11.38**	**12.45**	**17.17**	**8.84**	**6.72**	**6.98**	**8.86**
Average $/Barrel	**56.49**	**66.02**	**72.21**	**99.60**				

a Graph is plotted with daily 2008 data.

b Henry Hub is a natural gas pipeline hub in Louisiana.

Source: Oil Daily, electronically received data; WTI information also from http://tonto.eia.doe.gov/dnav/pet/pet_pri_spt_s1_d.htm; Henry Hub data also from http://www.neo.ne.gov/statshtml/124_20081203.htm; .

National Indices of Price Inflation

PRODUCER PRICE INDEX
9.8%

Price inflation indices are a measure of how much prices have changed from year to year. Each index is the ratio of prices in a given year to the base year. Each different index is normalized to 100 in different years. See footnotes for specific years. The percentage figure is the percent change from the previous year.

In 2008, the Producer Price Index jumped by 9.8 percent over 2007.

1970-2008 ANNUAL RATE OF INFLATION

Year	Gross Domestic Product[a,r]		Producer Price Index[b]		Personal Consumption Expenditures[c,r]		Consumer Price Index[d]	
1970	27.53	5.3%	36.9	3.7%	26.45	4.8%	38.8	5.7%
1975	38.00	9.4%	58.4	9.2%	35.96	8.3%	53.8	9.1%
1980	54.04	9.1%	89.8	14.1%	52.08	10.7%	82.4	13.5%
1985	69.71	3.0%	103.2	-0.5%	66.94	3.3%	107.6	3.6%
1990	81.59	3.9%	116.3	3.7%	80.50	4.6%	130.7	5.4%
1995	92.11	2.0%	124.7	3.6%	91.58	2.2%	152.4	2.8%
1996	93.85	1.9%	127.7	2.4%	93.55	2.2%	156.9	3.0%
1997	95.41	1.7%	127.6	-0.1%	95.12	1.7%	160.5	2.3%
1998	96.47	1.1%	124.4	-2.5%	95.98	0.9%	163.0	1.6%
1999	97.87	1.5%	125.5	0.9%	97.58	1.7%	166.6	2.2%
2000	100.00	2.2%	132.7	5.7%	100.00	2.5%	172.2	3.4%
2001	102.40	2.4%	134.2	1.1%	102.09	2.1%	177.1	2.8%
2002	104.19	1.7%	131.1	-2.3%	103.54	1.4%	179.9	1.6%
2003	106.41	2.1%	138.1	5.3%	105.60	2.0%	184.0	2.3%
2004	109.46	2.9%	146.7	6.2%	108.39	2.6%	188.9	2.7%
2005[r]	113.03	3.3%	157.4	7.3%	111.58	2.9%	195.3	3.4%
2006[r]	116.68	3.2%	164.7	4.6%	114.67	2.8%	201.6	3.2%
2007[r]	119.82	2.7%	172.6	4.8%	117.66	2.6%	207.3	2.8%
2008[p]	**122.42**	**2.2%**	**189.6**	**9.8%**	**121.59**	**3.3%**	**215.3**	**3.9%**

a Gross Domestic Product Implicit Price Deflator, 2000 = 100, used in other tables to deflate residential, commercial, industrial, motor fuel and electric utility prices.

b All commodities, 1982 = 100, BLS series ID: WPU00000000.

c Implicit Price Deflator, 2000 = 100.

d All items, all urban consumers, 1982-1984 = 100, BLS series ID: CUUR0000SA0.

p Preliminary estimates.

r Revised.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Economic Indicators* (March 2009) http://www.bea.gov/national/nipaweb/TableView.asp, *Survey of Current Business* (March 2009), and Bureau of Labor Statistics, (March 2009) http://data.bls.gov/cgi-bin/surveymost?cu.